

REMARKS

Claims 1-9, 11, 13-19, 21-27, 29-62 are pending in the present application. Of these claims, claims 30-49 and 52 are withdrawn from further consideration as being related to a nonelected invention. Applicants respectfully request reconsideration of the present claims in view of the following remarks.

Claim Rejections Under 35 U.S.C. § 103(a)

The Examiner has rejected claims 1-9, 11-19, 21-27, 29, 50, 52, 53, and 54 under 35 U.S.C. § 103(a) as obvious over Gladfelter et al. (U.S. 5,358,653) ("Gladfelter") in view of Holdt et al. (U.S. 4,683,072) ("Holdt") and Kitko (U.S. 4,248,827) ("Kitko"). Applicants respectfully traverse this rejection.

Active halogen, e.g. chlorine, materials have been available for bleaching, sanitizing and cleaning purposes for many years See Specification, page 2, lines 3-4. These sanitizing solutions are used until depleted of an effective chlorine content and are replaced when the concentration of the oxidizing species drops below a certain concentration typically below about 50 ppm active chlorine. Maintaining an effective concentration of the oxidizing species in the final sanitizing solution is important to maintain cleanliness, sanitization and a stain free condition in the ware. See Specification, page 3, lines 9-13.

Prior to the current invention, dishwashing or kitchen personnel did not know when to change the chlorine depleted solution to maintain at least 50 ppm active chlorine. As a result, the sanitizing solution was discarded and replenished very often resulting in substantial waste of materials, time and money. Potentially worse is a situation in which

the solution was not changed often enough, resulting in inadequate sanitization due to an active chlorine concentration less than 50 ppm. See Specification, page 3, lines 20-25.

Applicants' claimed invention helps to solve the problems described above by providing a composition that indicates when the sanitizing solution should be changed. Applicants' claimed invention, as claimed in amended claims 1, 9, 19, and 50, is generally directed to an active chlorine containing composition comprising a source of dye which, when reacted with the source of chlorine, changes or depletes its color over a predetermined time of 15 minutes to 24 hours. More specifically, Applicants' invention is directed to using the pH of the solution to manipulate the time before the dye changes or depletes its color. See Application page 6 lines 21-30; page 7 line 25 to page 8 lines 8; Example III page 27; and Figure 1. Figure 1 shows that the amount of hypochlorite ion in solution depends on the pH of the solution. Since it is the hypochlorite ion that causes the color of the dye to change or be depleted, controlling the pH and therefore the hypochlorite ion concentration also controls the amount of time before the dye changes or depletes its color. The concentration of hypochlorite ion concentration is relatively stable between the pH range of 3 and 7 as shown by Figure 1. Consequently, the presence of the dye is also relatively stable between the pH range of 3 and 7. See Example III, page 27. This aspect of the invention is now reflected in amended claims 1, 9, 19, and 50.

Gladfelter, Holdt, and Kitko all fail to teach or suggest, either individually or in combination with each other, the manipulation of pH to control the time before a dye changes or depletes its color.

Gladfelter teaches the use of a chlorinated solid rinse aid useful in warewashing. See Gladfelter, Abstract. As the Examiner correctly pointed out, Gladfelter teaches that a

dye may be optionally added for a more pleasing appearance of the rinse aid and that the dye should be stable against degradation in the presence of strong chlorine releasing agents. See Gladfelter, column 11, lines 30-38. The Examiner took the position that the stability of the dye referred to stability during storage, not during the disinfecting process. The Examiner's interpretation of this aspect of Gladfelter is no longer pertinent in light of the amended claims. As the Examiner pointed out, the dye in Gladfelter should not change color in the composition but should be stable. A composition with a stable dye teaches away from the composition in Applicants' invention because the composition in Applicants' invention does change color over time, depending on the pH of the composition. See amended claim 1 element (b); and amended claim 19 element (c). See also, MPEP §§ 2141 and 2141.02.

Holdt teaches a tablet for cleaning and disinfecting a toilet. See Holdt, Abstract. The composition in Holdt may include a dye. See Holdt, column 2, lines 18-20, and column 2 line 61 to column 3 line 3. The dye may be included to provide a colored rinse solution that gives an impression of cleanliness and hygiene and to show through the absence of color that the tablet is no longer effective. See Holdt, column 3, lines 1-3. Holdt does not discuss or suggest the pH of the composition, the manipulation of the pH to change the color of the dye, or the effect of pH on the dye. While the dye in Holdt changes color as a signal to show that the composition is no longer effective, there is not a discussion or suggestion that changing the pH would change the amount of time before the color changed or that such a manipulation of pH and the time before the color change would be desirable. The composition in Applicants' invention does change color over

time, depending on the pH of the composition. See amended claim 1 element (b); and amended claim 19 element (c).

Kitko teaches a method of sanitizing toilets using a hypochlorite sanitizing agent and an oxidizable dye, wherein the dye is oxidized from a colored state to a colorless state within 5 seconds to 10 minutes after contact with the hypochlorite. See Kitko, Abstract; and column 2, lines 13-18. Kitko teaches that suitable dyes include those that change color within 5 seconds to 10 minutes in tap water, where the pH of the tap water ranges from 6 to 9. See Kitko, column 3, lines 53-64. The dye in Kitko changes to a colorless state very shortly after contacting the hypochlorite. Kitko does not discuss or suggest the manipulation of pH to control the amount of time before the dye changes color. The pH of the composition is discussed only in the context of selecting dyes that change color rapidly at the pH normally found in a toilet bowl. The composition in Applicants' invention has a dye that changes color over 15 minutes to 24 hours. See amended claim 1, element (b); amended claim 9, element (c); amended claim 19, element (b); and amended claim 50, element (b). Additionally, the composition in Applicant's invention has a pH in the range from about 3 to about 7. See amended claim 1, element (b); amended claim 9, element (c); amended claim 19, element (b); and amended claim 50, element (b).

Further, Kitko does not discuss or suggest the dye should be altered to change color after a period of time longer than 10 minutes. On the contrary, Kitko teaches away from persistent color. See Kitko, column 1, lines 33-36 and lines 48-57. See also, MPEP §§ 2141 and 2141.02. According to Kitko, the prior art teaches toilet bowl cleaners and sanitizers with persistent color but that persistent color is not desirable because it (1)

causes staining of the toilet bowl; (2) obscures medical symptoms such as the passing of blood; and (3) obscures soiling on the toilet bowl below the water line. Therefore, the object of Kitko is to provide a toilet bowl sanitizer with a dye that changes color very shortly after flushing, which differs significantly from the claimed invention. Applicants' invention may have a dye that is present from about 15 minutes to about 24 hours. See amended claim 1, element (b); amended claim 9, element (c); amended claim 19, element (b); and amended claim 50, element (b). The presence of a dye for 15 minutes to 24 hours, would provide the undesirable effects described in Kitko, and therefore is contrary to the invention described in Kitko.

Applicants respectfully submit that Gladfelter, Holdt, and Kitko lack the requisite suggestion or motivation, either themselves or in the knowledge generally available to a person of ordinary skill in the art to modify the inventions disclosed in each reference or combine the reference teachings to achieve Applicants invention. Further, even if Gladfelter, Holdt, and Kitko were properly combined, the combined teaching fails to teach or suggest the claimed limitations of Applicants invention, namely an active chlorine composition having (1) a source of chlorine; and (2) a dye that changes color over a predetermined time from 15 minutes to 24 hours when the pH is in the range of about 3 to about 7.

For at least the reasons given above, Applicants respectfully submit that the combined teaching of Gladfelter, Holdt, and Kitko fails to make obvious Applicants' claimed invention as embodied in independent claims 1, 9, 19, and 50. Since claims 2-8, 11-18, 29, 51, 53, 54 depend from claims 1, 9, 19, and 50 and recite additional claim features, Applicants respectfully submit that the combined teaching of Gladfelter, Holdt,

and Kitko also fails to make obvious Applicants' claimed invention in dependent claims 2-8, 11-18, 29, 51, 53, and 54-62. Accordingly, withdrawal of this rejection and allowance of these claims are respectfully requested.

Applicants' arguments and amendments have been made solely to advance prosecution of the application and not to acquiesce to the Examiner's rejections.


Applicants believe that the previous arguments were correct. Applicants also wish to point out that the pending appeal in this application was withdrawn only in an effort to advance prosecution. Applicants reserve the right to appeal this case in the future.

Should the Examiner believe that anything further is necessary to place the application in better condition for allowance, the Examiner is respectfully requested to contact Applicants' representative at the telephone number listed below.

No additional fees are believed due, however, the Commissioner is hereby authorized to charge any deficiency, or credit any overpayment to Deposit Account No. 501257.

Respectfully submitted,

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